

Docket No.: 30521/3070A
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Steven E. Boor

Application No.: 10/797,507

Confirmation No.: 3966

Filed: March 10, 2004

Art Unit: 2615

For: MODIFIABLE BUFFER CIRCUIT FOR
MINIATURE MICROPHONE APPLICATIONS
AND METHOD OF ADJUSTING THEREOF

Examiner: F. O. Olaniran

APPEAL BRIEF

MS Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Madam:

Pursuant to the Notice of Appeal mailed November 24, 2008 in connection with the above-identified patent application, applicant respectfully submits a three-month extension of time, thereby extending the period for submission of this Brief until April 24, 2009. The Director is hereby authorized to charge our Credit Card in the amount of 1,650.00, pursuant to 37 C.F.R. §§ 1.17(c), 1.17(a)(3). If there are any additional fees or refunds required, the Commissioner is directed to charge or debit Deposit Amount No. 13-2855 (30521/3070A).

This brief contains items under the following headings as required by 37
C.F.R. § 41.37 and M.P.E.P. § 1205.2:

I.	Real Party In Interest
II	Related Appeals and Interferences
III.	Status of Claims
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V.	Summary of Claimed Subject Matter
VI.	Grounds of Rejection to be Reviewed on Appeal
VII.	Argument
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I. REAL PARTY IN INTEREST

The real party in interest is Knowles Electronics, LLC, the assignee of the above-identified patent application. The assignment assigning rights to Knowles Electronics, LLC, is recorded in the United States Patent and Trademark Office (“USPTO”) at Frame 015565 of Reel 0530.

II. RELATED APPEALS AND INTERFERENCES

There are no other appeals, interferences, or judicial proceedings known to the applicant, Patent Owner or the Patent Owner's legal representative, which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

Currently, claims 1-24 are pending in this application. The pending claims are presented in Appendix A of this Brief. Claims 1-24 stand rejected and form the subject matter of this appeal.

IV. STATUS OF AMENDMENTS

The claims were submitted for reconsideration on October 23, 2008. The claims presented in Appendix A and the “Summary of Claimed Subject Matter” reflect the claims as presented in the paper submitted on October 23, 2008.

Applicant submits no additional amendments have been made with the filing of this Brief.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Although specification citations are inserted in accordance with C.F.R. 1.192(c), these reference numerals and citations are merely examples of where support may be found in the specification for the terms used in this section of the Brief. There is no intention to in any way suggest that the terms of the claims are limited to the examples in the specification. Although, as demonstrated by the reference numerals and citations below, the claims are fully supported by the specification as required by law, it is improper under the law to read limitations from the specification into the claims. Pointing out specification support for the claim terminology, as is done here to comply with C.F.R. 1.192(c), does not in any way limit the scope of the claims to those examples from which they find support. Nor does this exercise provide a mechanism for circumventing the law precluding reading limitations into the claims from the specification.

Independent claim 1 recites a buffer circuit 100 contained in a microphone housing 316 of a microphone assembly 312. The buffer circuit 100 comprises an input 104 for receiving a signal, an input buffer 102 coupled to the input 104, an output 108, a filter network 106 coupled between the input buffer 102 and the output 108, and a selector 112. The selector 112 comprises a first input 234, a first output 230 responsive to the first input 234, and a tuning circuit 110 coupled to the filter network 106 for adjusting a characteristic of the filter network 106. The tuning circuit 110 responds to the selector 112 and the characteristic of the filter network 106 is adjusted using the first input 234.

Independent claim 15 recites a hybrid circuit for buffering an audio signal. The hybrid circuit comprises a substrate having a first portion, and a second portion 318 severable from the first portion. The hybrid circuit further includes a buffer circuit 100 substantially disposed on the first portion of the substrate. The buffer circuit 100 includes a first input 234 for coupling the audio signal, a filter network 218 coupled to the first input 234, a tuner 224 for adjusting the filter network 218, and a controller 232 for altering a value of the tuner 224. The controller 232 has a second input 317 that is disposed on the second

portion 318 of the substrate. A tuning signal coupled to the second input 317 is used to adjust the tuner 224, thereby changing a transfer function of the buffer circuit 100.

Independent claim 20 recites a method for adjusting a buffer circuit 100 for use in a microphone assembly 312, wherein the buffer circuit 100 is placed in a microphone housing 316 of the microphone assembly 312. Claim 20 further recites providing a desired response characteristic for the buffer circuit 100, measuring an initial response characteristic of the buffer circuit 100, comparing the desired response characteristic to the initial response characteristic, determining an adjustment, and reducing a difference between the desired and initial response characteristics. Claim 20 further recites transmitting a signal to a selector circuit 112 in the buffer circuit 100 and tuning an adjustable filter 218 coupled to the selector circuit 112. The adjustable filter 218 modifies the initial response characteristic.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Applicant appeals from the rejection of claims 1-3, 9, 10, 12-17, 19, 20, and 22 as being unpatentable over Levitt US 4,879,749 (“Levitt”), where Levitt fails to disclose a buffer circuit (including its elements) contained in the microphone housing of the microphone assembly as proffered by the office action. The rejection is thus improper.

Applicant appeals from the rejection of claims 4-8, 18, and 23 as being unpatentable over Levitt in view of Killion US 5,602,925 (“Killion”). There is no motivation to combine the references as suggested by the office action and the resulting combination does not teach each and every limitation of the claims. The office action has thus failed to make a *prima facie* case of obviousness.

Applicant appeals from the rejection of claims 11 and 24 as being unpatentable over Levitt in view of Advani US 4,926,459 (“Advani”), where there is no motivation to combine the references as proffered by the office action, the resulting combination does not teach each and every limitation of the claims, and hence, the office action has failed to make a *prima facie* case of obviousness.

Applicant appeals from the rejection of claim 21 as being unpatentable over Levitt in view of Madaffari US 2002/0090102 (“Madaffari”), where there is no motivation to combine the references as proffered by the office action, the resulting combination does not teach each and every limitation of the claim, and hence, the office action has failed to make a *prima facie* case of obviousness.

VII. ARGUMENT

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the reference(s) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the reference(s), and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). The burden is initially on the office action, but once established the *prima facie* case of obviousness must be rebutted by the applicant.

To reach a proper determination under 35 U.S.C. § 103(a), the office action must step backward in time and into the shoes worn by the hypothetical "person of ordinary skill in the art" when the invention was unknown and just before it was made. In view of all factual information, the office action must then make a determination whether the claimed invention "as a whole" would have been obvious at that time to that person. Knowledge of applicant's disclosure must be put aside in reaching this determination, yet kept in mind in order to determine the "differences," conduct the search and evaluate the "subject matter as a whole" of the invention. The tendency to resort to "hindsight" based upon applicant's disclosure is often difficult to avoid due to the very nature of the examination process. However, impermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art. M.P.E.P. § 2142.

Applicant respectfully submits the office action has not made out a *prima facie* case obviousness, and claims 1-24 are distinguishable from and allowable over the cited combinations of references. Applicant respectfully requests the Board reverse the rejections of claims 1-24 and return the application to the Examiner for action consistent therewith.

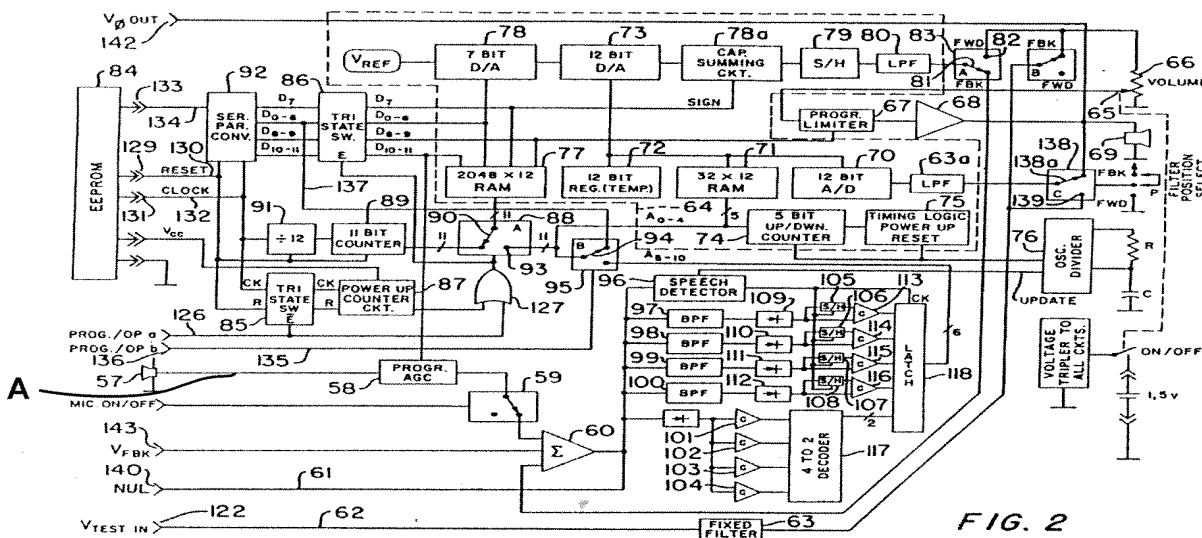
A. Claims 1-3, 9, 10, 12-17, 19, 20, and 22 recite subject matter patentable over Levitt

Independent claim 1

The action concedes that Levitt does not disclose a buffer circuit in a microphone housing (Final Action, page 4, lines 6 and 7). Nonetheless, the action rejects independent claim 1, contending that Levitt discloses elements of the buffer circuit that are contained in the microphone housing (Final Action, page 4, lines 8 and 9).

The action notes the following basis for rejecting independent claim 1 (Final Action, page 4, lines 10-12): It would be obvious to one of ordinary skill in the art at the time the invention was made that the placement of selected elements within a housing would be determined by space considerations and design choice.

The action further relies on FIG. 2 and column 3, lines 39-41 of Levitt for the disclosure a microphone housing (Final Action, page 3, section 3, line 5). However, Levitt states the following (See Col. 3, ll. 39-41): “FIG. 2 illustrates schematically one form of programmable hearing aid according to the invention which utilizes a digital delay line filter,” 64 (Col. 3, ll. 39-41, underlining added)



Levitt Annotated Figure 2

Levitt does not teach a microphone buffer circuit

Levitt, at best, discloses a host controller 20 (See FIG. 1) connected to a hearing aid (See FIG. 2) that programs selected parameter values into an electronically erasable, programmable read only memory (EEPROM) 84 and a programmable filter 64 fitted in the hearing aid to have selected characteristics to compensate for hearing deficiencies (See Col. 2, ll. 39-42, ll. 48-50, and Col. 7, ll. 65-68). The EEPROM 84 in Levitt supplies coefficients to the programmable filter 64 to cause the hearing aid to adjust automatically to the optimum set of parameter values for the speech level, room reverberation, and type of background noise (*See* Col. 2, ll. 50-56).

This disclosure of Levitt is distinct from claim 1. Claim 1 calls for a microphone buffer circuit 100. The buffer circuit 100 fitted in a microphone housing 316 allows adjustments in the gain and/or phase of the frequency response of a microphone assembly 312 (See Para. [0013]). The concept of using a microphone buffer circuit 100 is completely missing from Levitt. There is nothing in Levitt, in its entirety, that mentions or suggests a microphone buffer circuit, of any kind. Although the drawing (FIG. 2) shows a microphone 57, Levitt gives no indication in the drawings and in the specification that a buffer circuit is provided for the microphone 57. Therefore, Levitt cannot be said to teach or suggest a microphone buffer circuit.

Further, the host controller 20, the EEPROM 84, the programmable filter 64, and the amplifier 60 of Levitt have been mischaracterized in the office action as the microphone buffer circuit in claim 1 (Final Action, page 3, section 3, line 3). According to Levitt, the host controller 20 is an independent computer-aid test device used to program the hearing aid. (See FIG. 1) The EEPROM 84, the filter 64, and the amplifier 60 are the hearing aid's components (See FIG. 2). Therefore, the host controller 20, the EEPROM 74, the filter 64, and the amplifier of Levitt cannot be said to be the microphone buffer circuit.

**Levitt Does Not Teach a Microphone Housing or a Buffer Circuit
Contained in a Microphone Housing**

Levitt describes a microphone 57 connected to an automatic gain control (AGC) 58 and a programmable filter 64. (*See* Col. 4, ll. 65-68 and Col. 5, ll. 1-11) As can be seen, the microphone 57 is located outside the AGC 58 and the programmable filter 64. A wire A electrically connects the microphone 57 to the AGC 58 and in return, the AGC 58 is connected to the programmable filter 64. (FIG. 2, Col. 4, ll. 65-68)

This disclosure of Levitt is distinct from claim 1. Claim 1 calls for a microphone housing 316. A buffer circuit 100 fitted in the microphone housing 316 allows adjustments in the gain and/or phase of the frequency response of a microphone assembly 312. (*See* Para. [0013]) The concept of fitting the buffer circuit 100 in the microphone housing 316 is completely missing from Levitt. There is nothing in Levitt, in its entirety, or at Col. 3 ll. 39-41, that mentions or suggests a microphone housing, of any kind. Although FIG. 2 of Levitt shows a microphone 57, Levitt does not disclose a microphone housing. Also, Levitt gives no indication in the drawing and the specification that the elements 58, 64 are contained in the microphone 57. As illustrated in FIG. 2, the wire A connects the microphone 57 to the AGC 58 and other components. If the AGC 58 is contained in the microphone 57, Levitt would have illustrated the microphone 57 outlining around the AGC 58 as a whole, and hence there would be no purpose or reason to wire the microphone 57 to the AGC 58 using the wire A.

Simply put, Levitt does not teach or suggest elements disposed within a microphone 57. Further, the Levitt components have nothing to do with adjusting the gain and/or phase of the frequency response of a microphone assembly 312 as disclosed in the claims recited in the present application. Moreover, the Levitt components are not designed for use in the microphone 57, but are instead designed for use in the hearing aid. (*See* FIG. 2) It would be necessary for Levitt to describe the elements as being disposed within a microphone 57 for it to teach each and every limitation of claim 1. Because Levitt cannot reasonably be interpreted to disclose that the AGC 58, the filter 64, of any kind, are contained in the microphone 57, it cannot and does not anticipate or render unpatentable claim 1.

Further, the hearing aid of Levitt has been mischaracterized in the office action as a microphone housing. (Final Action, page 3, section 3, line 5) As indicated by the underlined portion of the above excerpt, Levitt discloses a hearing aid. (See FIG. 2) Components (including elements 58, 64) shown in FIGs. 2, 4, and 5 of Levitt are incorporated in the hearing aid. (See Col. 11, ll. 41 and 42) Therefore Levitt cannot be said to teach or suggest a microphone housing and a buffer circuit contained in the microphone housing.

For the reasons discussed above, Levitt fails to teach, suggest, or disclose the subject matter recited in claim 1. Withdrawal of the rejection of claim 1 under 35 U.S.C. §103(a) is respectfully requested.

In view thereof, claims 2-14 depend directly or indirectly therefrom are also allowable. The Board is respectfully requested to reverse the rejection of claims 1-14 and place these claims for immediate allowance.

Independent Claim 15**Levitt Does Not Teach a Hybrid Circuit With First and Second Portions**

Levitt teaches two separate devices, a hearing aid and a computer-aid test device (a host controller) 20, and each device has its own circuitry. As shown in FIGs. 1 and 2, of Levitt the host controller circuit connects to the hearing aid circuit via connectors 31, 34, 121, 144 and terminals 122, 140, 142, 143 for adjusting the coefficients and parameters of the hearing aid circuit to compensate for the hearing deficiencies of a patient. Such adjustment can be done many times, as needed.

This disclosure of Levitt is distinct from claim 15. Claim 15 calls for a hybrid circuit (substrate) with a first portion and a second portion 318. The second portion 318 is removed from the first portion once an adjustment to a buffer circuit 100 disposed on the first portion is completed. This effectively locks the buffer circuit 100 in a final configuration, both electrically and physically, leaving the microphone assembly 312 in a final form factor and the first portion of the substrate is no longer accessible. (*See* Para. [0022]) The concept of having a first portion and a second portion on the same hybrid circuit is completely missing from Levitt. There is nothing in Levitt, in its entirety, that mentions or suggests a hearing aid circuit and a host controller circuit built on a same circuit (substrate). In Levitt, the hearing aid circuit and the host controller circuit are two distinctly separate substrates. Therefore Levitt cannot be said to teach a hybrid circuit having a first portion and a second portion.

For the reasons discussed above, Levitt fails to teach, suggest, or disclose the subject matter recited in claim 15. Withdrawal of the rejection of claim 15 under 35 U.S.C. §103(a) is respectfully requested.

In view thereof, claims 16-19 depending directly or indirectly therefrom are also allowable. The Board is respectfully requested to reverse the rejection of claims 15-19.

Independent claim 20

Independent claims 1 and 20 are similar and each recite a buffer circuit for used in a microphone assembly. Claim 20 differs from claim 1 in that, claim 20 is written as a method claim.

For reasons similar to those outlined above with respect to claim 1, Levitt fails to teach, suggest, or disclose the subject matter recited in claim 20. Withdrawal of the rejection of claim 20 under 35 U.S.C. §103(a) is respectfully requested.

In view thereof, claims 21-24 depending directly or indirectly therefrom are also allowable. The Board is respectfully requested to reverse the rejection of claims 20-24.

B. Claims 4-8, 18, and 23 Recite Subject Matter Patentable Over the Levitt/Killion Combination

The action concedes that Levitt does not disclose a tuning circuit comprising a resistor network (claim 4), a ladder network (claims 5-7 and 18), and activating a semiconductor device between an element of a ladder network and a ground connection (claim 23). The action contends that Killion discloses the recited subject matters in claims 4-7, 18, and 23. Also, the action states the following basis for rejecting claim 8 (Final Action, page 10, lines 3-7):

It would be obvious to one of ordinary skill in the art at the time the invention was made to set the value of the resistive element to 5.5 ohms in the course of circuit design so as to limit current applied or as necessary.

These contentions are respectfully traversed.

Levitt and Killion do not teach a microphone buffer circuit and a buffer circuit for use in a microphone

Killion, at best, discloses a hearing aid 2 with a tuning circuit 34. As shown in FIG. 3, the tuning 34 is electrically wired to a microphone 21 via an amplifier 42. As

applicant has already established above, the Levitt teaching relates to a hearing aid and a hearing aid circuit is fitted in the hearing aid. These disclosures of Killion and Levitt are distinct from claims 4-7, 18, and 23. Both Levitt and Killion teach hearing aids and circuitries for the hearing aid devices and Levitt/Killion circuit is completely different from the microphone buffer circuit 316 of the present application.

Claim 4

Claim 4 depends from claim 1, which recites the tuning circuit comprises a resistor network. As elements are missing from claim 1, the same elements are missing from claim 4. As a result, a *prima facie* case of obviousness has not been made against claim 4. The rejection should be withdrawn and the claim should be allowed.

Claim 5

Claim 5 depends from claim 1, which recites the tuning circuit is a ladder network. As elements are missing from claim 1, the same elements are missing from claim 5. As a result, a *prima facie* case of obviousness has not been established with respect to claim 5. The rejection should be thus withdrawn and the claim should be allowed.

Claim 6

Claim 6 depends from claim 5, which recites that the tuning circuit is a ladder network. Claim 6 adds that the ladder network includes one of resistors and capacitors. Claim 6 depends from claim 5 and claim 5 depends from claim 1, and as elements are missing from claim 1, the same elements are missing from claim 6. As a result, a *prima facie* case of obviousness has not been made against claim 6. The rejection should thus be withdrawn and the claim should be allowed.

Claim 7

Claim 7 depends from claim 6, which recites that the ladder network includes one of resistors and capacitors. Claim 7 adds that the resistor has a value of 5.5K ohms. Claim 7 depends from claim 6 and claim 6 depends from claim 5 which depends from claim

1, and as elements are missing from claim 1, the same elements are missing from claim 7. As a result, a *prima facie* case of obviousness has not been made against claim 7. The rejection should thus be withdrawn and the claim should be allowed.

Claim 18

Claim 18 depends from claim 15, which states the tuning circuit is a ladder network. As elements are missing from claim 15, the same elements are missing from claim 18. As a result, a *prima facie* case of obviousness has not been made against claim 18, the rejection should be withdrawn and the claim should be allowed.

Claim 23

Claim 23 depends from claim 20, which recites tuning the adjustable filter further comprises activating a semiconductor device between an element of a ladder network and a ground connection. As elements are missing from claim 20, the same elements are missing from claim 23. As a result, a *prima facie* case of obviousness has not been made against claim 23. The rejection should thus be withdrawn and the claim should be allowed.

For at least the reasons set forth above, the Levitt/Killion combination does not result in a proper *prima facie* case of obviousness because the resulting combination does not include each and every element of pending claims. As such, the rejection of claims 4-7, 18, and 23 based on the Levitt/Killion combination is unsustainable. The Board is respectfully requested to reverse the rejection of claims 4-7, 18, and 23 and place these claims for immediate allowance.

C. Claims 11 and 24 recite subject matter patentable over Levitt/Advani combination

The action concedes that Levitt does not disclose a zener-zap diode biasing element (claim 11) and biasing the selector circuit with a zener-zap diode (claim 24). However, the action contends that Advani discloses the recited subject matters in claims 11 and 24. These contentions are respectfully traversed.

Levitt and Avani do not teach a microphone buffer circuit for use in a microphone assembly

Avani, at best, discloses a telephone set with a power regulation and storage circuit 24 and a zener- diode 106 is provided in the circuit 24 to limit the voltage (FIG. 1, Col. 7, ll. 46 and 47). As applicant has already established above, the Levitt teaching relates to a hearing aid and a hearing aid circuit that is fitted in the hearing aid.

These disclosures of Avani and Levitt are distinct from claims 11 and 24. None of the references (Levitt and Avani) teaches a microphone buffer circuit and a circuit that is fitted in a microphone housing. In Avani, the zener-diode 106 is identified for use in the power regulation and storage circuit 24 and the Avani circuit 24 has nothing to with the hearing aid as disclosed in Levitt. Moreover, the Avani circuit 24 has nothing to do with the microphone assembly 312 in the present invention. The motivation stated in the action for making the proposed combination is that modifying the circuit of Levitt with a zener-zap diode in order to utilize the breakdown characteristic of diodes. However, as noted above, the Avani device is a power regulation and storage circuit 24 for use in a telephone set and has nothing to do with programming the hearing aid in the present invention.

Furthermore, in view of the strategy of the Avani circuit 24 to limit the voltage to transistors 109, 110, it would not make any sense to include the zener-diode 106 of the Avani circuit 24 in the Levitt device.

There is no motivation to combine the references as presented in the action because the resulting combination would render the modified device unsatisfactory for its intended purpose. The action thus does not make out a *prima facie* of obviousness rendering claims 11 and 24 unpatentable. Withdrawal of the rejection of claims 11 and 24 under 35 U.S.C. §103(a) is respectfully requested.

Claim 11

Claim 11 depends from claim 9, which recites that the first input is coupled to a biasing element. Claim 11 adds that the biasing element is a zener-zap diode. Claim 11 depends from claim 9 and claim 9 depends from claim 1, and as elements are missing from claim 1, the same elements are missing from claim 9. As a result, a *prima facie* case of obviousness has not been made against claim 9. The rejection should thus be withdrawn and the claim should be allowed.

Claim 24

Claim 24 depends from claim 20, which recites biasing the selector circuit with a zener-zap diode. As elements are missing from claim 20, the same elements are missing from claim 24. As a result, a *prima facie* case of obviousness has not been made against claim 24. The rejection should thus be withdrawn and the claim should be allowed.

For at least the reasons set forth above, the Levitt/Avani combination is improper as there is no motivation to combine the references as presented in the action. As such, the rejection of claims 11 and 24 based on the Levitt/Avani combination is unsustainable. The Board is respectfully requested to reverse the rejection of claims 11 and 24 and place these claims for immediate allowance.

D. Claim 21 recites subject matter patentable over Levitt/Madaffari combination

The action concedes that Levitt does not disclose a portion of the buffer circuit accessible from outside the housing. However, the action contends that Madaffari discloses the subject matter recited in claim 21. This contention is respectfully traversed.

Levitt and Madaffari do not teach a microphone buffer circuit

Madaffari, at best, discloses a microphone assembly 100 and a printed circuit board (PCB) 16 acoustically sealed in the microphone assembly 100 (See FIG. 1, Para. [0015]). As applicant has already established above, the Levitt teaching relates to a hearing aid and a hearing aid circuit is fitted in the hearing aid.

These disclosures of Madaffari and Levitt are distinct from claim 21. Claim 21 calls for a microphone buffer circuit. The concept of assembling the buffer circuit in an acoustically sealed housing and yet allowing accessibility from outside the microphone housing is completely missing from Madaffari. In Madaffari, the PCB 16 is acoustically and electrically sealed to an inner wall of a microphone cover 40 (See FIG. 1). Once the PCB 16 is sealed inside the microphone assembly 100, it is impossible to access the PCB 16 from the outside the microphone assembly 100, unless the microphone cover 40 is completely destroyed.

As there is no motivation to combine the references as presented in the action at least because the resulting combination would render the modified device unsatisfactory for its intended purpose, the action does not make out a *prima facie* of obviousness rendering claim 21 unpatentable. Withdrawal of the rejection of claim 21 under 35 U.S.C. §103(a) is respectfully requested.

Claim 21

Claim 21 depends from claim 20, which states a portion of the buffer circuit is accessible from outside the microphone housing. As elements are missing from claim 20, the same elements are missing from claim 21. As a result, a *prima facie* case of obviousness has not been made against claim 21. The rejection should thus be withdrawn and the claim should be allowed.

For at least the reasons set forth above, the Levitt/Madaffari combination is improper as there is no motivation to combine the references as presented in the action. As such, the rejection of claim 21 based on the Levitt/Madaffari combination is unsustainable.

The Board is respectfully requested to reverse the rejection of claim 21 and place this claim for immediate allowance.

Dated: April 24, 2009

Respectfully submitted,

By 

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APPENDIX A

1. (Previously presented) A buffer circuit for use in a microphone assembly comprising:
 - a microphone housing;
 - an input for receiving a signal;
 - an input buffer coupled to the input;
 - an output;
 - a filter network coupled between the input buffer and the output; and
 - a selector comprising:
 - a first inputs;
 - a first output responsive to the first input; and
 - a tuning circuit coupled to the filter network for adjusting a characteristic of the filter network, the tuning circuit responsive to the selector and the characteristic of the filter network is adjusted using the first input;wherein the buffer circuit is contained in the microphone housing.
2. (Original) The buffer circuit of claim 1 wherein the first input is on a separable tab.
3. (Original) The buffer circuit of claim 1 wherein the first input is on a separable tab and the separable tab is removed from the buffer circuit after the characteristic of the filter network is adjusted.
4. (Previously presented) The buffer circuit of claim 1 wherein the tuning circuit comprises a resistor network.
5. (Previously presented) The buffer circuit of claim 1 wherein the tuning circuit is a ladder network, the ladder network adjustable by activating a semiconductor device between an element of the ladder network and a ground connection.

6. (Original) The buffer circuit of claim 5 wherein the ladder network comprises one of resistors and capacitors.

7. (Original) The buffer circuit of claim 6 wherein a resistor of the ladder network has a value of 5.5K ohms.

8. (Original) The buffer circuit of claim 5 wherein the semiconductor device is a field effect transistor (FET).

9. (Original) The buffer circuit of claim 1 wherein the first input is coupled to a biasing element.

10. (Original) The buffer circuit of claim 9 wherein the biasing element maintains a persistent state responsive to a programming signal applied to the first input.

11. (Original) The buffer circuit of claim 9 wherein the biasing element is a zener-zap diode.

12. (Original) The buffer circuit of claim 9 wherein the biasing element is an EEPROM.

13. (Previously presented) The buffer circuit of claim 1 further comprising a resistive element coupled between the filter network and the tuning circuit.

14. (Original) The buffer circuit of claim 13 wherein a value of the resistive element is 500K ohms.

15. (Original) A hybrid circuit for buffering an audio signal comprising:
a substrate having a first and second portion, the second portion severable from the first portion; and
a buffer circuit substantially disposed on the first portion of the substrate, the buffer circuit comprising:

a first input for coupling the audio signal;
a filter network coupled to the first input;
an output coupled to the filter network;
a tuner for adjusting the filter network; and
a controller for altering a value of the tuner, the controller having a second input, the second input disposed on the second portion of the substrate,
whereby a tuning signal coupled to the second input is used to adjust the tuner,
thereby changing a transfer function of the buffer circuit.

16. (Original) The hybrid circuit of claim 15 wherein the controller retains a setting upon receiving the tuning signal.

17. (Original) The hybrid circuit of claim 15 wherein the second portion of the substrate is permanently removed after the controller receives the tuning signal.

18. (Original) The hybrid circuit of claim 15 wherein the tuner is a ladder network, the ladder network adjustable by activating a semiconductor device between an element of the ladder network and a ground connection.

19. (Original) The hybrid circuit of claim 15 wherein the second input is further coupled to a biasing element, the biasing element maintaining a state after receiving the tuning signal.

20. (Previously presented) A method for adjusting a buffer circuit for use in a microphone assembly comprising:

providing a microphone housing and placing the buffer circuit in the microphone housing;

providing a desired response characteristic for the buffer circuit;

measuring an initial response characteristic of the buffer circuit;

comparing the desired response characteristic to the initial response characteristic;

determining an adjustment using the comparison, the adjustment for reducing a

difference between the desired and initial response characteristics;
transmitting a signal to a selector circuit in the buffer circuit; and
tuning an adjustable filter coupled to the selector circuit, the adjustable filter for
modifying the initial response characteristic.

21. (Original) The method of claim 20 further comprising:
assembling the buffer circuit in an acoustically sealed housing, a portion of the buffer
circuit accessible from outside the housing.

22. (Original) The method of claim 20 further comprising:
removing a portion of the buffer circuit used in transmitting the signal to the selector
circuit.

23. (Original) The method of claim 20 wherein the tuning the adjustable filter further
comprises activating a semiconductor device between an element of a ladder network and a
ground connection.

24. (Original) The method of claim 20 wherein the tuning the adjustable filter further
comprises biasing the selector circuit with a zener-zap diode.

APPENDIX B

None.

APPENDIX C

None.